INTERNATIONAL TELECOMMUNICATION UNION

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WORLD RADIOCOMMUNICATION CONFERENCE

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PLENARY MEETING

United States of America

PROPOSALS FOR THE WORK OF THE CONFERENCE

EARTH STATIONS ON BOARD VESSELS

Agenda Item 1.8

Background

This item concerns provision of broadband communications in the maritime context by earth stations on board vessels using frequencies and the existing space segment in the fixed-satellite service. These stations operate in three distinct modes:

- at sea;
- while stationary in port; and
- in motion along designated sea lanes while approaching or departing from port.

This agenda item was proposed by the United States to WRC-97 and was approved for the WRC-99 agenda. The item was assigned to Study Group 4-9S; Study Group 1 is listed as an interested group to provide guidance on associated regulatory issues.

The U.S. considers that operations at sea (beyond the yet-to-be-determined distance for near-shore coordination) by earth stations on board vessels in the fixed-satellite service do not present a potential for interference to terrestrial stations operating in accordance with an allocation, and therefore need not be coordinated. Operations while these earth stations are stationary in port are being coordinated in the U.S. as fixed-satellite service earth stations. Technical and regulatory issues concern the potential for interference between in-motion operations by these earth stations while close to shore and terrestrial stations in the fixed service.

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The common view of CITEL is, as a first approach and provided that these earth stations meet a minimum set of technical parameters, that there would appear to be no problem arising from transmissions from earth stations on board vessels which are at least a yet-to-be-determined distance from land. Although it seems to be feasible, the coordination of earth stations on board vessels moving near shore and in Stationary Modes at C Band needs further work. This includes technical and regulatory aspects, procedures, criteria, etc., which are being pursued by ITU-R.

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Proposal

MHz

3 600 – 4 200

Allocation to Services		
Region 1	Region 2	Region 3
3 600 – 4 200 FIXED FIXED-SATELLITE ADD S5.ESV (space-to-Earth) Mobile	**3 700 – 4 200** FIXED FIXED-SATELLITE (space-to-Earth) ADD S5.ESV MOBILE except aeronautical mobile	

MHz

5 850 – 7 450

Allocation to Services		
Region 1	Region 2	Region 3
5 925 – 6 425 FIXED FIXED-SATELLITE (Earth-to-space) ADD S5.ESV MOBILE S5.149 S5.440 S5.458		

ADD S5.ESV Earth stations located on board vessels may operate in the fixed-satellite service in accordance with Resolution ESV (WRC-2000).

Reasons: To establish regulatory and technical provisions for operations of earth stations on board vessels in the fixed-satellite service.

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RESOLUTION ESV (WRC-2000)

Provisions for the Use of Earth Stations in the Fixed-Satellite Service Located on board Vessels in the Bands 3 700-4 200 MHz and 5 925-6 425 MHz

The World Radiocommunication Conference (Istanbul, 2000),

considering

a) that the technology exists to permit the operation of earth stations on board vessels (ESV) in the fixed-satellite service in the bands 3 700-4 200 MHz (space-to-Earth), and 5 925-6 425 MHz (Earth-to-space);

b) that developmental operations on board vessels using such earth stations operating in fixed-satellite service networks have been conducted successfully for several years;

c) that, when such an fixed-satellite service earth station of one Administration is in and near the territory of another Administration in which there are fixed service stations or other co-primary services, coordination may be necessary;

d) that the coordination situations for such vessels include operations:

(i) a certain distance from the nearest point of land beyond which no coordination is necessary;

(ii) stationary (in port or moored);

(iii) in motion within the distance in (i) from the nearest point of land;

a) that methods exist for addressing the coordination situations in d) above,

resolves

1. that an earth station on board a vessel (ESV) may operate as a station in the fixed-satellite service while receiving in the 3 700-4 200 MHz band and transmitting in the 5 925-6 425 MHz band;

2. that operation of ESV earth stations which are at least [XXX] km from land requires no coordination;

3. that when earth stations on board vessels are operated in or near a port, either at a stationary position or while in motion, using the bands 3 700 - 4 200 MHz (space-to-Earth) and 5 925-6 425 (Earth-to-space) of the fixed-satellite service, they will do so as follows:

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(a) the authority over operations on radio frequencies within [XXX] km of land while in and near a port belongs with the Administration of that territory where the port is located; however, the responsibility for the ESV station lies with the Administration that authorized the use of the ESV station;

(b) The administration that authorizes the use of the ESV station in these bands shall ensure that they do not cause harmful interference to stations which themselves are established and operated in accordance with the Radio Regulations;

(c) It is expected that in each port where ESVs will be operating in the fixed-satellite service in these bands:

(i) a set of frequencies will be established for such use that have been coordinated with all other co-primary users;

(ii) this set of frequencies will not include the entire allocation in these bands;

(iii) coordination will be accomplished between the Administration(s) with authority over the terrestrial services operating in these bands in and near that port and the Administration that authorized the ESV station to operate in these bands;

(iv) upon completion of such coordination, the ESV station will be authorized to operate in the fixed-satellite service in these bands in and near the port;

(a) a list of the ESVs authorized to operate in and near a particular port and the frequencies and associated operational conditions which have been coordinated in that port will be established and maintained by the Administration responsible for that port and such list shall include a point of contact for obtaining this information;

(b) ESV station operators must comply with the conditions established by the authorizing Administration(s);

1. that coordination of in-motion ESV stations within [XXX] km of land shall be accomplished using the provisions of Annex 1 to this Resolution.

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ANNEX 1

To be developed

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